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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/614,276	07/12/2000	Wolfgang Theimer	473-009548-US(PAR)	2128

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EXAMINER
WOO, ISAAC M

ART UNIT	PAPER NUMBER
2172	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/614,276	Applicant(s) THEIMER ET AL.
	Examiner Isaac M Woo	Art Unit 2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 November 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-7 and 9-18* is/are pending in the application.

4a) Of the above claim(s) *1 and 8* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-7 and 9-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This action is in response to Applicant's amendments on November 08, 2002 have been considered but are deemed moot in view of new ground of rejections below for newly added subject matters.

2. The applicant amended claims 2-4, 9-10, 12, 14 and 17, and added new claim 18. And claims 1 and 8 are canceled.

3. The pending claims are 2-7, and 9-18.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazawa et al (U.S. Patent No. 6,070,139, hereinafter, "Miyazawa") in view of Weintraub (U.S. Patent No. 5,842,163).

With respect to claim 18 (independent claim), Miyazawa discloses for inputting data (21, FIG. 2 and col. 5, lines 27-31) into a system,

in response to an input by a user (col. 6, lines 14-16), identifying one or more terms, which are appropriate as possible for this input, see (col.8, lines 46-57 and col. 9, lines 48-59);

defining a confidence value for each of the identified terms, see (col. 8, lines 37-67 to col. 9, lines 1-43). Miyazawa dose not explicitly discloses the calculating an overall probability from the confidence value of the identified term and a probability value of a matching data record, the probability value describing the probability of the data record being used again; and processing the identified terms according to the overall probability. However, Weintraub discloses the calculating an overall probability (average probability) from the confidence value of the identified term and a probability value of a matching data record, the probability value describing the probability of the data record being used again, see (FIG. 1, col. 2, lines 1-67 to col. 3, lines 1-12, col. 3, lines 25-67 to col. 4, lines 1-67 to col. 5, lies 1-67 to col. 6, lines 1-55); processing the identified terms according to the overall probability, see (FIG. 1, col. 2, lines 1-67 to col. 3, lines 1-12, col. 3, lines 25-67 to col. 4, lines 1-67 to col. 5, lies 1-67 to col. 6, lines 1-55), which teaches that in order to overall (average) probability of input data, Weintraub combines (32, FIG. 1) confidence probability from acoustic model (24, FIG.1) and probability distribution of word which teaches that identifies identified term (keyword) appears all words sequences, which is identified terms is being used again. Therefore, in view of Weintraub, it would have been obvious a person having ordinary skill in the

art the time invention was made to combine the calculating an overall probability from the confidence value of the identified term and a probability value of a matching data record, the probability value describing the probability of the data record being used again, processing the identified terms according to the overall probability with the system of Kobayashi to get overall probability of identified term to be inputted. In order to get high confidence level of speech recognition system, one of the confidence factor, the probability of terms distributed or being used again, improves the confidence level of speech conversion for inputting.

With respect to claim 2, Miyazawa discloses the confidence value a value from an interval between number, preferably 1, corresponding to reliable identification, and that for an input which can not be identified, corresponding to 0, including these values, see (FIG. 5B and col. 8, lines 63-67 to col. 9, lines 1-4).

With respect to claim 3, Miyazawa discloses the identified terms are announced and/or displayed to a user as a system response, starting with the term identified as being the most reliable, on the basis of their overall probability (confidence value), see (col. 9, lines 34-67 to col. 10, lines 1-32).

With respect to claim 4, Miyazawa discloses each identified term, those data records which are appropriate for the identified terms are looked for in a list of stored

data records, see (FIG. 4A-C; col. 6, lines 51-67 to col. 7, lines 1-46 and col. 10, lines 18-41).

With respect to claim 5, Miyazawa discloses when data being input, the input is completed by a data record appropriate for the identified term, using a form-based dialogue structure, see (col. 10, lines 66-67 to col. 11, lines 1-34).

With respect to claim 6, Miyazawa discloses that the data input is completed in response to a request signal, see (col. 11,lines 11-34).

With respect to claim 7, Miyazawa discloses that the number of data records found can be reduced by inputting one or more further terms, see (FIG. 4A-C; col. 6, lines 51-67 to col. 7, lines 1-46 and col. 8, lines 46-57).

With respect to claim 9, Miyazawa discloses the probability value for a data record corresponds to the ratio of the number of times this data record has been used to the total number of times all the data records have been used, see (col. 9, lines 12-43).

With respect to claim 10, Miyazawa discloses that an announcement/display sequence of the data record is defined as a function of their overall probability (confidence value), see (col. 9, lines 1-67 to col. 10, lines 32).

With respect to claim 11, Miyazawa discloses that the identified terms are announced and/or displayed individually and successively, or as a selection list for confirmation or selection, see (col. 8, lines 37-67 to col. 9, lines 1-43).

With respect to claim 12, Miyazawa discloses Miyazawa discloses if the input is a voice input, the confidence value is established in the normal manner for voice recognition, see (col. 8,lines 7-27 and col. 9,lines 1-11).

With respect to claim 13, Miyazawa discloses that the voice input by a user is first of all subjected to speaker identification, and in that the subsequent voice recognition process is carried out taking account of the result of the speaker identification, see (col. 1, lines 31-42).

With respect to claim 14, Miyazawa discloses that the input is made via an alphanumeric input device, with the terms entered in this way first of all being assigned the confidence value for reliable identification, see (FIG. 4A-D and col. 6. lines 51-67 to col. 7, lines 1-60).

With respect to claim 15, Miyazawa discloses that the incorrectly alphanumerically input term, which has already frequently been input incorrectly in a manner specific to a particular user, is assigned a lower confidence value as a function of input-specific error statistics, see (col. 9,lines 1-43).

With respect to claim 16, Miyazawa discloses that the incorrectly alphanumerically input term, which has already frequently been input incorrectly in a manner specific to a particular user, is automatically corrected, with corrected term being assigned a confidence value which is lower than the confidence value for reliable identification, see (FIG. 4-5; col. 7, lines 11-60 and col. 8,lines 28-67 to col. 9,lines 1-43).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Alleva et al (U.S. Patent No. 5,710,899) discloses the system for recognizing an input speech utterance compares the input speech utterance to a plurality of hidden Markov models to obtain a constrained acoustic score that reflects the probability that the hidden Markov model matches the input speech utterance. The method computes a confidence measure for each hidden Markov model that reflects the probability of the constrained acoustic score being correct. The computed confidence measure is then used to adjust the constrained acoustic score. Preferably, the confidence measure is computed based on a difference between the constrained acoustic score and an unconstrained acoustic score that is computed independently of any language context. In addition, a new confidence measure

preferably is computed for each input speech frame from the input speech utterance so that the constrained acoustic score is adjusted for each input speech frame.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac M Woo whose telephone number is (703) 305-0081. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y Vu can be reached on (703) 305-4393. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 308-6606 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

IMW
January 10, 2003

KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100